

REMARKS

Favorable reconsideration of this application is requested in view of the foregoing amendments and the following remarks. Claims 20-31, 38-41 and 45-47 are pending in the application. Claims 1-19, 21, 32-37 and 42-44 are canceled without prejudice or disclaimer.

All of the claims of this application are amended to specifically require a carbon containing expanded base that is substantially cylindrically symmetrical. Support for this important limitation is found in claim 21 as originally filed. The title is amended to more concisely/clearly name the claimed invention. The abstract is amended to more concisely/clearly summarize the claimed invention.

In the Office Action, the Examiner discusses a restriction requirement. Applicant affirms the election of Group II, claims 20-31, 38-41 and 45-47. Claims 1-19, 32-37 and 42-44 were withdrawn from consideration in the Action.

Applicant is investigating inventorship to determine whether the inventorship should be changed in light of the cancelled claims. A timely Petition to change inventorship will be filed if such a change is determined to be necessary.

Claims 20-31 were rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 20-29 of U.S. Pat. No. 6,649,431. A terminal disclaimer with regard to U.S. Pat. No. 6,649,431 is filed herewith as a separate paper.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 45-47 were rejected under 35 USC 112(2) as indefinite. The phrase mechanically strong has been deleted from claim 45.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 20-23, 25-26, 28-31 and 45-47 were rejected under 35 USC 102(b) as anticipated by Blanchet-Fincher et al '677.

Blanchet-Fincher et al '677 discloses argon ion beam milling a diamond like carbon film to sculpt carbon cone and carbon whisker field emitters, as shown in Fig 11 of Blanchet-Fincher et al '677. However, the cone and whisker emitters of Blanchet-Fincher et al '677 are inherently non-cylindrically symmetric. The cone and whisker emitters of Blanchet-Fincher et al '677 are inherently non-cylindrically symmetric because they are ion beam milled. Referring to column 14, lines 4-15 of Blanchet-Fincher et al '677 (and figures 10a, 10b and 11), the cone and whisker emitters of Blanchet-Fincher et al '677 all point toward the source of the argon ion beam. The cone and whisker emitters of Blanchet-Fincher et al '677 are only formed in the locations on the wire substrate that are indicated in figure 11 of Blanchet-Fincher et al '677. It is important to understand that the cone bases of the Blanchet-Fincher et al '677 emitters are all inherently non-cylindrically symmetric because more base material is inherently removed on the side of the cones that faces the incoming argon ions.

All of the claims of this application are amended to specifically require a carbon containing expanded base that is substantially cylindrically symmetrical. The presently claimed invention is not disclosed or suggested by Blanchet-Fincher et al '677 because the Blanchet-Fincher et al '677 reference does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical.

Accordingly, withdrawal of this rejection is respectfully requested.

Claims 38-41 were rejected under 35 USC 102(e) as anticipated by Jin '132.

All of claims 38-41 are amended to specifically require a carbon containing expanded base that is substantially cylindrically symmetrical. The presently claimed invention is not disclosed or suggested by Jin '132 because the Jin '132 reference does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical.

Accordingly, withdrawal of this rejection is respectfully requested.

Claim 24 stands rejected under 35 USC 103 as obvious over Blanchet-Fincher et al '677 in view of Bardai et al. '070.

Claim 24 now also requires a carbon containing expanded base that is substantially cylindrically symmetrical and, as noted above, the Blanchet-Fincher et al '677 reference does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical. Bardai et al. '070 does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical.

Moreover, combining the ion beam teachings of Blanchet-Fincher et al. '677 with the hollow deposited funnel teachings of Barbai et al. '070 would result in an inoperative amalgamation. Specifically, the argon ion milling of Blanchet-Fincher would destroy the hollow funnel structures of Barbai et al. '070.

Accordingly, withdrawal of this rejection is respectfully requested.

Claim 27 stands rejected under 35 USC 103 as obvious over Blanchet-Fincher et al '677 in view of Uemura et al. (i.e., U.S. Pat. No. 6,239,547).

Claim 27 now also requires a carbon containing expanded base that is substantially cylindrically symmetrical and, as noted above, the Blanchet-Fincher et al '677 reference does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical. Uemura et al. does not describe or teach a carbon containing expanded base that is substantially cylindrically symmetrical.

Moreover, combining the ion beam teachings of Blanchet-Fincher et al. '677 with the hollow tube teachings of Uemura et al would result in an inoperative amalgamation. Specifically, the argon ion milling of Blanchet-Fincher would destroy the hollow tube structures of Uemura et al.

Accordingly, withdrawal of this rejection is respectfully requested.

Other than as explicitly set forth above, this reply does not include acquiescence to statements in the Office Action. In view of the above, all the claims are considered patentable and allowance of all the claims is respectfully requested. The Examiner is invited to telephone the undersigned (at direct line 512-394-0118) for prompt action in the event any issues remain that prevent the allowance of any pending claims.

A petition for revival is filed herewith as a separate paper. The Director of the U.S. Patent and Trademark Office is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-3204 of John Bruckner PC.

Respectfully submitted,

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